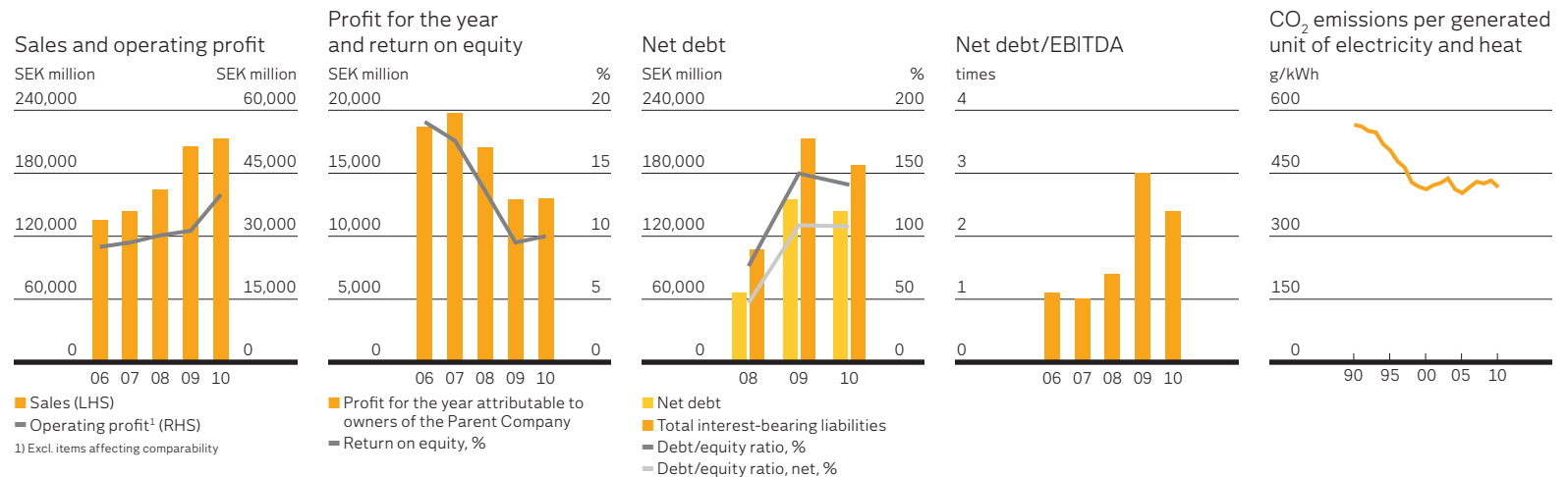
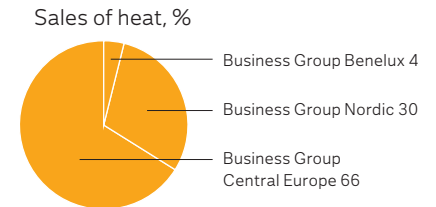
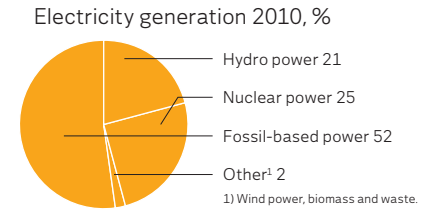


# Vattenfall Introduction Pack

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# Vattenfall today – a European energy company

Vattenfall is one of Europe's largest generators of electricity and the largest producer of heat. Consolidated sales in 2010 amounted to SEK 213,572 million. Vattenfall's main products are electricity, heat and gas. In electricity and heat, Vattenfall works in all parts of the value chain: generation, distribution and sales. In gas, Vattenfall is mainly active in sales. Vattenfall is also engaged in energy trading and lignite mining. The Group has slightly more than 38,000 employees. The Parent Company, Vattenfall AB, is 100%-owned by the Swedish state. The core markets are Sweden, Germany and the Netherlands. In 2010 operations were also conducted in Belgium, Denmark, Finland, Poland and the UK.



## Important events 2010

### 12/3

Vattenfall announces plan to divest its high-voltage transmission grid in Germany.

### 12/4

Øystein Løseth takes office as new President and CEO of Vattenfall AB.

### 27/4

Alpha ventus, Germany's first offshore wind farm, is inaugurated.

### 16/6

Vattenfall acquires stake in Liberian biomass company Buchanan Renewables Fuel to secure long-term supply of biomass.

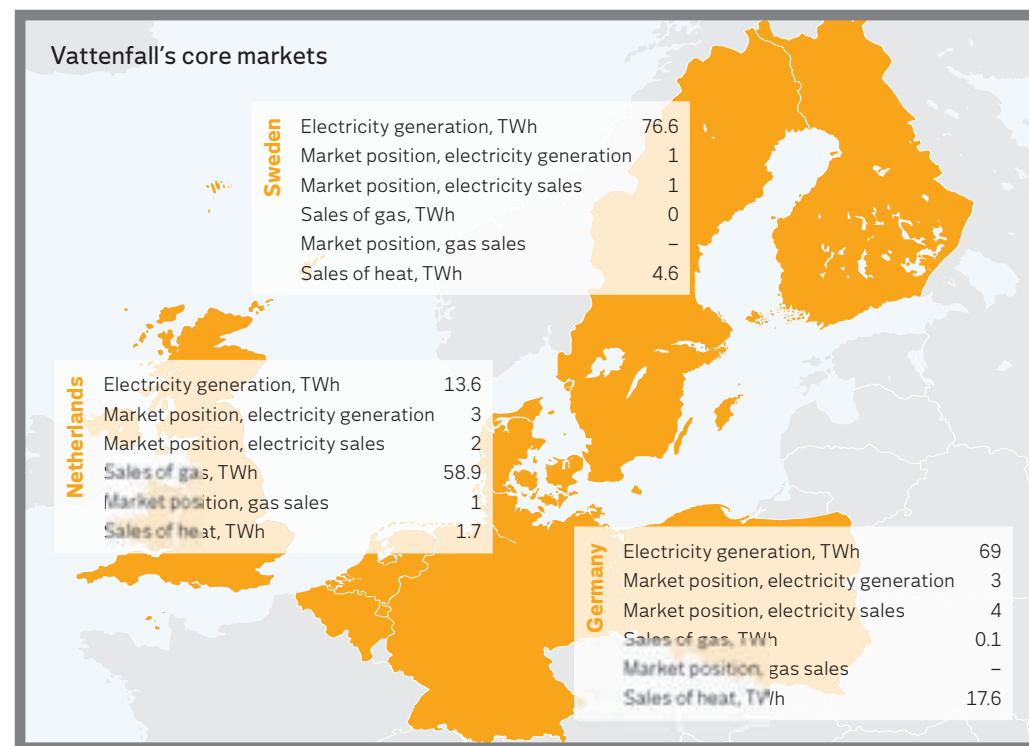
### 17/6

Sweden's parliament lifts ban on construction of new nuclear reactors in Sweden.

	2010	2009	Change, %	2010, EUR m <sup>1</sup>	2009, EUR m <sup>1</sup>
Net sales, SEK million	213,572	205,407	4.0	23,725	22,818
EBITDA, SEK million	60,706	51,777	17.2	6,744	5,752
Operating profit, SEK million	29,853	27,938	6.9	3,316	3,104
Operating profit excl. items affecting comparability, SEK million	39,952	31,294	27.7	4,438	3,476
Profit before tax, SEK million	21,423	17,734	20.8	2,380	1,970
Profit for the year, SEK million	13,185	13,448	-2.0	1,465	1,494
Return on equity, %	10.0	9.5	-		
Return on net assets, %	9.1	10.0	-		
Total assets, SEK million	541,432	602,127	-10.1	60,146	66,888
Equity/total assets, %	24.7	23.7	-		
Net debt, SEK million	144,109	154,987	-7.0	16,009	17,217
Funds from operations (FFO), SEK million	40,108	36,700	9.3	4,455	4,077
Free cash flow, SEK million	23,846	27,566	-13.5	2,649	3,062
Investments, SEK million	41,794	102,989	-59.4	4,643	11,441
Electricity generation, TWh	172.5	158.9	8.6		
Sales of gas, TWh	63.3	20.1 <sup>2</sup>	-		
Sales of heat, TWh	44.5	37.9	17.4		
Number of employees, full-time equivalents	38,179	40,026	-4.6		

1) Exchange rate SEK 9.002 = EUR 1. The EUR values are shown only to facilitate comparisons between SEK and EUR.

2) Pertains to quarters 3-4 2009.



During the past decade Vattenfall has carried out a substantial expansion, transforming itself from a Swedish nuclear and hydro power operator to a major player in the European energy sector. International diversification has provided Vattenfall with more stable cash flow and a stronger platform for continued growth and value creation. However, Vattenfall is currently facing a number of challenges, including a weaker market outlook, pressure on profit margins and a need to reduce the company's CO<sub>2</sub> exposure. Vattenfall has therefore formulated a new vision and initiated a new strategic direction (for more information see pages 4-15).

### Vattenfall's other markets

	Denmark	Finland	Poland	Belgium	UK
Electricity generation, TWh	8.4	0.6	3.6	-	0.7
Market position, electricity generation	2	>10	7	-	- <sup>1</sup>
Market position, electricity sales	-	3	5	3	-
Sales of gas, TWh	0	0.2	0	4.1	-
Market position, gas sales	-	-	-	3	-
Sales of heat, TWh	7.0	1.7	11.9	-	-

1) Second largest in offshore wind power.

## 23/8

An Extraordinary General Meeting approves amendment to Vattenfall AB's Articles of Association clarifying Vattenfall's assignment.

## 5/9

Agreement reached on lifetime extensions of German nuclear power plants and new tax on nuclear fuel.

## 21/9

Vattenfall announces new strategic direction and new organisational structure.

## 23/9

Vattenfall inaugurates Thanet, the world's largest offshore wind farm, in the UK.

## 21/10

Decision to build DanTysk, a large offshore wind farm in the German North Sea, together with Stadtwerke München.

## 15/12

Vattenfall and E.ON agree on joint optimisation process for the Krümmel and Brunsbüttel nuclear power plants in Germany.

# Ten-year review

Amounts in SEK million	Swedish GAAP				IFRS						
	2001	2002	2003	2004	2004	2005	2006	2007	2008	2009	2010
<b>Income statement items</b>											
Net sales	69,003	101,025	111,935	111,016	111,016	123,794	135,802	143,639	164,549	205,407	213,572
EBITDA	18,207	25,489	24,450	31,347	33,161	43,175	43,938	45,821	45,960	51,777	60,706
Operating profit (EBIT)	9,916	13,997	14,868	19,501	17,887	28,363	27,821	28,583	29,895	27,938	29,853
Operating profit (EBIT) <sup>1</sup>	8,779	13,550	14,605	18,682	20,102	25,377	27,448	28,497	30,220	31,294	39,952
Financial income	2,232	3,010	2,267	1,772	2,969	3,810	3,839	2,276	3,412	2,814	2,514
Financial expenses	-4,737	-6,386	-5,203	-4,020	-6,297	-6,013	-6,135	-6,926	-9,809	-13,018	-10,944
Profit before tax	7,411	10,621	11,932	17,253	14,559	26,160	25,525	23,933	23,498	17,734	21,423
Profit for the year	5,287	8,224	9,529	12,348	9,604	20,518	19,858	20,686	17,763	13,448	13,185
– of which, attributable to owners of the Parent Company	4,190	7,566	9,123	11,776	8,944	19,235	18,729	19,769	17,095	12,896	12,997
– of which, attributable to minority interests	1,097	658	406	572	660	1,283	1,129	917	668	552	188
<b>Cash flow items</b>											
Funds from operations (FFO)	13,148	17,106	18,804	24,159	24,302	31,386	35,673	34,049	30,735	36,700	40,108
Free cash flow	5,478	10,820	11,606	15,684	15,684	14,341	23,178	19,650	18,963	27,566	23,846
<b>Balance sheet items</b>											
Cash and cash equivalents and short-term investments	10,340	15,473	14,647	13,616	13,616	14,074	22,168	22,659	40,236	56,940	43,873
Equity	61,101	57,532	64,328	73,947	85,551	90,909	107,674	124,132	140,886	142,404	133,621
– of which, attributable to owners of the Parent Company	42,021	47,572	54,949	64,759	75,437	80,565	96,589	111,709	129,861	135,620	126,704
– of which, attributable to minority interests	19,080	9,960	9,379	9,188	10,114	10,344	11,085	12,423	11,025	6,784	6,917
Interest-bearing liabilities	88,723	94,838	85,631	73,013	73,013	78,663	71,575	67,189	107,347	213,494	188,277
Net debt	55,736	75,207	66,890	55,411	55,411	64,343	49,407	43,740	66,000	154,987	144,109
Provisions	–	–	–	–	61,941	65,123	66,094	73,985	89,799	91,100	87,822
Noninterest-bearing liabilities	109,219	123,906	115,006	109,955	64,700	90,373	77,823	72,930	107,795	155,129	131,712
Net assets, weighted average value	100,701	127,479	124,229	123,423	134,125	143,001	151,155	157,252	179,114	245,016	293,298
Balance sheet total	259,043	276,276	264,965	256,915	285,205	325,068	323,166	338,236	445,827	602,127	541,432
<b>The key ratios are presented as percentages (%) or times (x)</b>											
Operating margin, %	14.4	13.9	13.3	17.6	16.1	22.9	20.5	19.9	18.2	13.6	14.0
Operating margin, % <sup>1</sup>	12.7	13.4	13.0	16.8	18.1	20.5	20.2	19.8	18.4	15.2	18.7
Pre-tax profit margin, %	10.7	10.5	10.7	15.5	13.1	21.1	18.8	16.7	14.3	8.6	10.0
Pre-tax profit margin, % <sup>1</sup>	9.1	10.1	10.4	14.8	15.1	18.7	18.5	16.6	14.5	10.2	14.8
Return on equity, %	11.1	18.0	19.2	21.4	12.2	23.2	19.1	17.6	13.6	9.5	10.0
Return on equity, % <sup>1</sup>	9.7	17.3	18.8	20.4	13.9	19.4	18.7	17.5	13.8	11.4	17.7
Return on net assets, %	9.8	11.0	12.0	15.8	12.2	18.4	17.1	16.6	15.1	10.0	9.1
Return on net assets, % <sup>1</sup>	8.7	10.6	11.8	15.1	13.9	16.3	16.8	16.6	15.3	11.4	12.5

1) Excl. items affecting comparability.

Amounts in SEK million	Swedish GAAP				IFRS						
	2001	2002	2003	2004	2004	2005	2006	2007	2008	2009	2010
<i>cont.</i> The key ratios are presented as percentages (%) or times (x)											
EBIT interest cover, (x)	2.6	2.7	3.3	5.3	4.4	7.6	7.2	6.7	4.5	3.1	4.1
EBIT interest cover, (x) <sup>1</sup>	2.3	2.6	3.2	5.1	5.0	6.9	7.1	6.7	4.6	3.4	5.4
FFO interest cover, (x)	3.8	3.7	4.6	7.0	6.6	8.9	9.7	8.6	5.4	4.8	6.2
FFO interest cover, net, (x)	6.2	6.1	7.4	11.7	8.9	15.1	15.9	12.2	7.1	5.6	7.5
Cash flow interest cover after maintenance investments, (x)	2.2	2.7	3.2	4.9	5.5	5.5	7.9	6.4	4.1	4.3	4.6
FFO/gross debt, %	14.8	18.0	22.0	33.1	30.0	39.9	49.8	50.7	28.6	17.2	21.3
FFO/net debt, %	23.6	22.7	28.1	43.6	43.9	48.8	72.2	77.8	46.6	23.7	27.8
EBITDA/net financial items, (x)	7.3	7.6	8.3	13.9	10.8	19.3	18.4	15.1	9.1	6.5	9.8
EBITDA/net financial items, (x) <sup>1</sup>	6.8	7.4	8.2	13.6	11.5	18.0	18.2	15.0	9.2	6.9	11.5
Equity/total assets, %	23.7	20.9	24.4	28.8	30.0	28.0	33.3	36.7	31.6	23.7	24.7
Gross debt/equity, %	144.9	164.7	133.0	98.7	85.3	86.5	66.5	54.1	76.2	149.9	140.9
Net debt/equity, %	91.2	130.7	104.0	74.9	64.8	70.8	45.9	35.2	46.8	108.8	107.8
Gross debt/gross debt plus equity, %	59.2	62.2	57.1	49.7	46.0	46.4	39.9	35.1	43.2	60.0	58.5
Net debt/net debt plus equity, %	47.7	56.7	51.0	42.8	39.3	41.4	31.5	26.1	31.9	52.1	51.9
Net debt/EBITDA, (x)	3.1	3.0	2.7	1.8	1.7	1.5	1.1	1.0	1.4	3.0	2.4

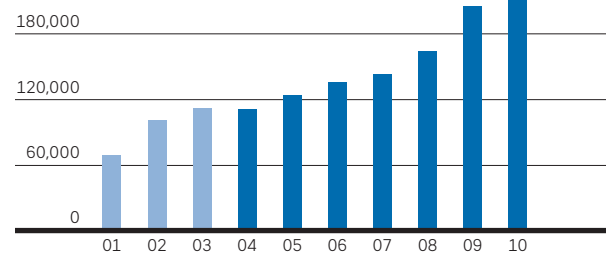
**Other information**

Dividend to owners of the Parent Company	1,030	1,675	2,400	5,600	5,600	5,800	7,500	8,000	6,900	5,240	6,500 <sup>2</sup>
Investments	43,443	39,932	11,356	12,601	12,731	24,497	17,220	18,964	42,296	102,989	41,794
Electricity generation, TWh	140,9	158,5	155,8	167,1	167,1	169,1	165,4	167,6	162,1	158,9	172,5
Average number employees	23,814	34,248	35,296	33,017	33,017	32,231	32,308	32,396	32,801	36,593	38,459

1) Excl. items affecting comparability. 2) Proposed dividend.

**Net sales**

SEK million  
240,000

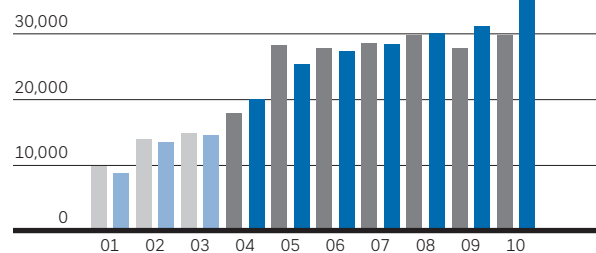


■ Net sales (Sw. GAAP) ■ Net sales (IFRS)

**Comment:** Net sales have more than trebled since 2001, mainly due to Vattenfall's substantial international expansion. From having been essentially a national, Swedish electric utility, through a number of major acquisitions primarily in Germany, Poland, Denmark, the UK and the Netherlands, Vattenfall has grown to become one of Europe's largest generators of electricity and largest producer of heat.

**Operating profit**

SEK million  
40,000



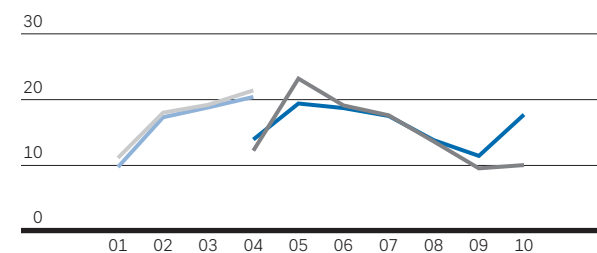
■ Operating profit (Sw. GAAP) ■ Operating profit<sup>1</sup> (Sw. GAAP)  
■ Operating profit (IFRS) ■ Operating profit<sup>1</sup> (IFRS)

1) Excl. items affecting comparability.

**Comment:** Vattenfall's operating profit has grown substantially during the last ten years due to successful integration work as well as to higher generation volumes and higher wholesale electricity prices.

**Return on equity**

%  
40



■ Return on equity (Sw. GAAP) ■ Return on equity<sup>1</sup> (Sw. GAAP)  
■ Return on equity (IFRS) ■ Return on equity<sup>1</sup> (IFRS)

1) Excl. items affecting comparability.

**Comment:** Return on equity has varied between 9.7% (2001, Swedish GAAP) and 23.2% (2005, IFRS) during the 10-year period, compared with Vattenfall's current target return of 15% over a business cycle.

# Facts about Vattenfall's markets

	Sweden		Finland		Denmark		Germany		Poland		Netherlands		Belgium		UK		Total	
	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009
<b>Installed capacity</b>																		
<b>electricity, MW<sup>1</sup></b>																		
Hydro power <sup>2</sup>	8,510	8,510	126	126	-	-	2,880	2,880	-	-	-	-	-	-	-	-	11,516	11,516
Nuclear power	6,792	6,786	-	-	-	-	771	771	-	-	-	-	-	-	-	-	7,563	7,557
Fossil-based power	1,212	1,212	45	45	1,757	1,757	11,292	11,292	878	878	3,764	3,646	-	-	-	-	18,948	18,830
of which, gas	-	-	45	45	137	137	1,712	1,712	-	-	2,861	2,743	-	-	-	-	4,755	4,637
of which, lignite	-	-	-	-	-	-	7,123	7,123	-	-	-	-	-	-	-	-	7,123	7,123
of which, hard coal	-	-	-	-	1,620	1,620	1,826	1,826	878	878	903	903	-	-	-	-	5,227	5,227
of which, oil	1,212	1,212	-	-	-	-	631	631	-	-	-	-	-	-	-	-	1,843	1,843
Wind power	258	164	-	-	388	377	13	13	30	30	313	313	15	15	431	102	1,448	1,014
Biomass, waste	179	159	20	20	126	126	123	74	-	-	-	-	-	-	-	-	448	379
<b>Total Electricity</b>	<b>16,951</b>	<b>16,831</b>	<b>191</b>	<b>191</b>	<b>2,271</b>	<b>2,260</b>	<b>15,079</b>	<b>15,030</b>	<b>908</b>	<b>908</b>	<b>4,077</b>	<b>3,959</b>	<b>15</b>	<b>15</b>	<b>431</b>	<b>102</b>	<b>39,923</b>	<b>39,296</b>
<b>Installed capacity</b>																		
<b>heat, MW</b>	<b>2,441</b>	<b>2,398</b>	<b>930</b>	<b>930</b>	<b>2,223</b>	<b>2,223</b>	<b>10,013</b>	<b>10,088</b>	<b>4,707</b>	<b>4,707</b>	<b>2,844</b>	<b>2,364</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23,158</b>	<b>22,710</b>
<b>Generated</b>																		
<b>electricity, TWh</b>																		
Hydro power <sup>2</sup>	31.9	30.8	0.3	0.4	-	-	3.1	2.5	-	-	0.1	0.2	-	-	-	-	35.4	33.9
Nuclear power	43.6	41.5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43.6	41.5
Fossil-based power	0.1	-	0.1	0.1	7.4	7.2	65.2	61.7	3.6	3.5	13.3	7.8	-	-	-	-	89.7	80.4
of which, gas	-	-	0.1	0.1	0.5	0.4	3.9	3.5	-	-	9.3	5.3	-	-	-	-	13.8	9.3
of which, lignite	-	-	-	-	-	-	52.4	50.4	-	-	-	-	-	-	-	-	52.4	50.4
of which, hard coal	-	-	-	-	6.9	6.7	8.9	7.9	3.6	3.5	4.0	2.5	-	-	-	-	23.4	20.6
of which, oil	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Wind power	-	0.4	-	-	0.7	0.7	0.1	0.1	-	-	0.2	0.2	-	-	0.7	0.3	2.2	1.7
Biomass, waste	-	0.3	0.1	-	0.2	-	0.7	1.1	-	-	-	-	-	-	-	-	1.5	1.4
<b>Total Electricity</b>	<b>-</b>	<b>73.0</b>	<b>0.5</b>	<b>0.5</b>	<b>8.3</b>	<b>7.9</b>	<b>69.1</b>	<b>65.4</b>	<b>3.6</b>	<b>3.5</b>	<b>13.6</b>	<b>8.2</b>	<b>-</b>	<b>-</b>	<b>0.7</b>	<b>0.2</b>	<b>172.5</b>	<b>158.9</b>
<b>Heat sales, TWh</b>																		
Fossil-based power	0.1	0.1	0.8	0.7	5.4	5.2	16.3	14.4	11.5	10.6	1.7	0.6	-	-	-	-	35.8	31.6
of which, gas	-	-	0.7	0.7	0.8	0.5	5.1	4.5	-	-	1.7	0.6	-	-	-	-	8.3	6.3
of which, lignite	-	-	-	-	-	-	4.5	4.2	-	-	-	-	-	-	-	-	4.5	4.2
of which, hard coal	-	-	-	-	4.6	4.7	6.7	5.6	11.5	10.6	-	-	-	-	-	-	22.8	20.9
of which, oil	0.1	0.1	0.1	-	-	-	-	0.1	-	-	-	-	-	-	-	-	0.2	0.2
Biomass, waste	4.5	4.3	0.9	0.8	1.6	-	1.3	1.2	0.4	0.1	-	-	-	-	-	-	8.7	6.4
<b>Total Heat</b>	<b>4.6</b>	<b>4.4</b>	<b>1.7</b>	<b>1.5</b>	<b>7.0</b>	<b>5.2</b>	<b>17.6</b>	<b>15.6</b>	<b>11.9</b>	<b>10.7</b>	<b>1.7</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>44.5</b>	<b>37.9</b>
<b>Gas sales, TWh</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>0.2</b>	<b>-</b>	<b>-</b>	<b>0.1</b>	<b>0.3</b>	<b>-</b>	<b>-</b>	<b>58.9</b>	<b>18.3</b>	<b>4.1</b>	<b>1.3</b>	<b>-</b>	<b>-</b>	<b>63.3</b>	<b>20.1</b>

## Facts about Vattenfall's markets

	Sweden		Finland		Denmark		Germany		Poland		Netherlands		Belgium		UK		Total	
	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009
<b>Number of retail customers, electricity</b>	983,000	919,000	347,000	338,000	-	-	2,823,000	2,645,000	1,012,000	1,009,000	2,288,000	2,295,000	320,000	302,000	-	-	<b>7,773,000</b>	<b>7,508,000</b>
<b>Electricity volume, TWh retail customers</b>	9.6	7.6	2.8	3.2	-	-	9.0	8.4	2.7	2.7	8.8	4.4	1.5	0.7	-	-	<b>34.4</b>	<b>27.0</b>
<b>Electricity volume, TWh resellers</b>	4.2	4.0	0.7	0.6	1.7	1.8	26.6	21.0	0.7	-	-	-	-	-	-	-	<b>33.9</b>	<b>27.4</b>
<b>Electricity volume, TWh industries</b>	34.2 <sup>3</sup>	33.9 <sup>3</sup>	4.9	3.2	-	-	12.7 <sup>4</sup>	15.0 <sup>5</sup>	4.1	4.2	5.8	3.3	1.8	0.6	-	-	<b>63.5</b>	<b>60.2</b>
<b>Number of network customers</b>	921,000	920,000	393,000	387,000	-	-	3,273,000	3,234,000	1,132,000	1,128,000	-	-	-	-	-	-	<b>5,719,000</b>	<b>5,669,000</b>
<b>Number of gas customers</b>	-	-	300	300	-	-	9,300	12,600	-	-	1,935,000	1,934,000	190,000	177,900	-	-	<b>2,134,600</b>	<b>2,124,800</b>
Electricity network Transited volume, TWh <sup>6</sup>	73.4	68.4	6.4	6.1	-	-	27.1	27.7	14.0	13.0	-	-	-	-	-	-	<b>120.9</b>	<b>115.2</b>
Distribution network, km	168,000	175,000	74,000	73,000	-	-	137,000	138,000	70,000	70,000	-	-	-	-	-	-	<b>449,000</b>	<b>456,000</b>
<b>Number of employees (full-year equivalents)</b>																		
Countries	9,000	9,219	398	445	687	713	19,395	20,655	2,819	2,859	5,770	6,009	-	-	58	90	<b>38,127</b>	<b>39,990</b>
Group total <sup>7</sup>																	<b>38,179</b>	<b>40,026</b>

### Market position

	Sweden	Germany	Netherlands	Denmark	Finland	Poland	Belgium	UK
Electricity generation	1	3	3	2	>10	7	n.a.	n.a. <sup>8</sup>
Electricity distribution	2	4	n.a.	n.a.	2	5	n.a.	n.a.
Electricity sales	1	4	2	n.a.	3	5	3	n.a.
District heating	4	1	2	2	10	1	n.a.	n.a.
Gas sales	n.a.	n.a.	1	n.a.	n.a.	n.a.	3	n.a.

1) Certain values for 2009 have been adjusted compared with previously published information.

2) Mainly pumped storage power in Germany.

3) 3.6 TWh to industries in Norway

4) 5.6 TWh to industries in France.

5) 4.7 TWh to industries in France.

6) Excl. generation transiting.

7) There are 52 (36) employees in other countries.

8) Second largest in off-shore wind power.

Pro rata — Generation data corresponding to Vattenfall's ownership in the respective facilities

	Sweden		Finland		Denmark		Germany		Poland		Netherlands		Belgium		UK		Total	
	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009	2010	2009
<b>Installed capacity</b>																		
<b>electricity, MW<sup>1</sup></b>																		
Hydro power <sup>2</sup>	8,097	8,097	126	126	-	-	2,880	2,880	-	-	-	-	-	-	-	-	11,103	11,103
Nuclear power	4,645	4,641	-	-	-	-	1,469	1,469	-	-	-	-	-	-	-	-	6,114	6,110
Fossil-based power	1,212	1,212	45	45	1,757	1,757	11,292	11,292	877	877	3,764	3,646	-	-	-	-	18,947	18,829
of which, gas	-	-	45	45	137	137	1,712	1,712	-	-	2,861	2,743	-	-	-	-	4,755	4,637
of which, lignite	-	-	-	-	-	-	7,123	7,123	-	-	-	-	-	-	-	-	7,123	7,123
of which, hard coal	-	-	-	-	1,620	1,620	1,826	1,826	877	877	903	903	-	-	-	-	5,226	5,226
of which, oil	1,212	1,212	-	-	-	-	631	631	-	-	-	-	-	-	-	-	1,843	1,843
Wind power	258	164	-	-	324	313	28	28	30	30	211	211	8	8	431	102	1,290	856
Biomass, waste	179	159	20	20	126	126	100	51	-	-	-	-	-	-	-	-	425	356
<b>Total Electricity</b>	<b>14,391</b>	<b>14,273</b>	<b>191</b>	<b>191</b>	<b>2,207</b>	<b>2,196</b>	<b>15,769</b>	<b>15,720</b>	<b>907</b>	<b>907</b>	<b>3,975</b>	<b>3,857</b>	<b>8</b>	<b>8</b>	<b>431</b>	<b>102</b>	<b>37,879</b>	<b>37,254</b>
<b>Installed capacity</b>																		
<b>heat, MW</b>	<b>2,304</b>	<b>2,261</b>	<b>926</b>	<b>926</b>	<b>2,223</b>	<b>2,223</b>	<b>9,896</b>	<b>9,952</b>	<b>4,699</b>	<b>4,699</b>	<b>2,844</b>	<b>2,364</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>22,892</b>	<b>22,425</b>
<b>Generated</b>																		
<b>electricity, TWh</b>																		
Hydro power <sup>2</sup>	29.8	28.6	0.3	0.4	-	-	3.1	2.5	-	-	0.1	0.2	-	-	-	-	33.3	31.7
Nuclear power	29.9	28.3	-	-	-	-	2.3	2.3	-	-	-	-	-	-	-	-	32.2	30.6
Fossil-based power	0.1	-	0.1	0.1	7.1	7.1	65.1	61.9	3.6	3.5	13.2	7.8	-	-	-	-	89.2	80.4
of which, gas	-	-	0.1	0.1	0.5	0.4	3.9	3.5	-	-	9.2	5.3	-	-	-	-	13.7	9.3
of which, lignite	-	-	-	-	-	-	52.3	50.5	-	-	-	-	-	-	-	-	52.3	50.5
of which, hard coal	-	-	-	-	6.6	6.7	8.9	7.9	3.6	3.5	4.0	2.5	-	-	-	-	23.1	20.6
of which, oil	0.1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0.1	-
Wind power	0.5	0.4	-	-	0.7	0.7	0.1	0.1	-	-	0.4	0.3	-	-	0.7	0.3	2.4	1.8
Biomass, waste	0.5	0.3	0.5	0.2	0.4	-	0.6	0.9	0.1	-	-	-	-	-	-	-	2.1	1.4
<b>Total Electricity</b>	<b>60.8</b>	<b>57.6</b>	<b>0.9</b>	<b>0.7</b>	<b>8.2</b>	<b>7.8</b>	<b>71.2</b>	<b>67.7</b>	<b>3.7</b>	<b>3.5</b>	<b>13.7</b>	<b>8.3</b>	<b>-</b>	<b>-</b>	<b>0.7</b>	<b>0.3</b>	<b>159.3</b>	<b>145.9</b>
<b>Heat sales, TWh</b>																		
Fossil-based power	0.1	0.1	0.7	0.8	5.4	5.2	16.1	14.2	11.5	10.7	1.7	0.6	-	-	-	-	35.5	31.6
of which, gas	-	-	0.6	0.7	0.8	0.5	5.0	4.5	-	-	1.7	0.6	-	-	-	-	8.1	6.3
of which, lignite	-	-	-	-	-	-	4.5	4.0	-	-	-	-	-	-	-	-	4.5	4.0
of which, hard coal	-	-	-	-	4.6	4.7	6.6	5.6	11.5	10.7	-	-	-	-	-	-	22.7	21.0
of which, oil	0.1	0.1	0.1	0.1	-	-	-	0.1	-	-	-	-	-	-	-	-	0.2	0.3
Biomass, waste	4.3	4.0	0.9	0.8	1.5	-	1.3	0.9	0.4	0.1	-	-	-	-	-	-	8.4	5.8
<b>Total Heat</b>	<b>4.4</b>	<b>4.1</b>	<b>1.6</b>	<b>1.6</b>	<b>6.9</b>	<b>5.2</b>	<b>17.4</b>	<b>15.1</b>	<b>11.9</b>	<b>10.8</b>	<b>1.7</b>	<b>0.6</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>43.9</b>	<b>37.4</b>
<b>Gas sales, TWh</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>0.2</b>	<b>-</b>	<b>-</b>	<b>1.1</b>	<b>1.4</b>	<b>-</b>	<b>-</b>	<b>59.0</b>	<b>18.3</b>	<b>4.1</b>	<b>1.3</b>	<b>-</b>	<b>-</b>	<b>64.2</b>	<b>21.2</b>

# Vattenfall's history



**1909** The restructuring of the Trollhättan canal and hydro power plant to the Swedish State Power Board marks the birth of Vattenfall. The Swedish state had bought the water rights in Trollhättan a few years earlier and was now taking an active involvement in this emerging electricity generation technology.

**1909–1916** The first large hydro power plants – Olidan, Porjus and Älvkarleby – are built.

**1951** Inauguration of the Harsprånget hydro power plant, the world's largest hydro power plant in many respects. During the same year, the world's first 400 kilovolt transmission line is put in operation, stretching from northern Norrland to Hallsberg in central Sweden.

**1952** The entire Swedish national electricity grid is hooked together.

**1954** Vattenfall commissions the world's first commercial high-voltage direct current line – between the mainland and the island of Gotland.

**1975–1976** Vattenfall's first two nuclear reactors, Ringhals 1 and 2, are commissioned. During the 1970s and '80s, 12 reactors were built across Sweden, of which seven are owned by Vattenfall.

**1992** Vattenfall is transformed from a state enterprise to the limited liability company Vattenfall AB. Responsibility for the national grid – the Swedish high-voltage network – is transferred to the newly formed state authority Svenska Kraftnät.

**1995** Vattenfall's board charts out an international growth strategy for Vattenfall.

**1996** The Swedish electricity market is deregulated. The electricity grid operations are legally separated from electricity generation and sales.

## European expansion

**1996** Vattenfall's international expansion is initiated in 1996 through the acquisition of Hämeen Sähkö, a Finnish electricity distribution company. A representative office is opened in Hamburg, and Vattenfall begins working in the German market through the joint venture company VASA Energy.

**1998** The German electricity market is deregulated in April.

**1999** Vattenfall agrees to acquire 25.1% of the shares in HEW from the City of Hamburg, with an option for the city to sell another 25.1% to Vattenfall. The Barsebäck 1 nuclear reactor is decommissioned following a decision by Swedish parliament.

**2000** In January, 55% of the Polish heat production company EW is acquired in Warsaw, Poland. In August an agreement is signed with E.ON to acquire a majority shareholding in Berlin's energy company, Bewag. However, the deal is blocked by the US company Southern Energy (now Mirant).

**2001** In February a 32% stake is acquired in the Polish distribution company GZE. In May Vattenfall becomes a majority owner in HEW through share purchases from E.ON and Sydkraft. Also in May, HEW acquires the electricity generator VEAG, which also owns the electricity grid in eastern Germany, and the lignite producer LAUBAG.

**2002** In January Vattenfall acquires all of Mirant's shares in Bewag. Vattenfall's various acquisitions in Germany are gathered under the name Vattenfall Europe AG, which is formally established in August through the merger between HEW and VEAG, including LAUBAG. Vattenfall thereby becomes Germany's third-largest electricity generator.

**2003** In January/February, Bewag is merged into Vattenfall Europe

Olidan, on the Göta River, was one of the first hydro power stations built between 1909 and 1916 by the newly formed Swedish State Power Board.

AG. Vattenfall increases its stake in the Polish company EW to 70% and in GZE to 54%.

**2005** In April, 35.3% of the shares in the Danish company Elsam A/S are acquired. The nuclear reactor Barsebäck 2 is closed 31 May. In August, Vattenfall announces that it has gained possession of more than 95% of the shares in Vattenfall Europe AG and initiates compulsory redemption of the minority owners' shares.

**2006** On 1 January the local German brands HEW and Bewag, and the Polish brands EW and GZE, are replaced with the Vattenfall brand. Vattenfall increases its ownership in both Polish companies to 75%. On 1 July a number of Danish wind power and combined heat and power assets are acquired from the Danish company DONG in exchange for ownership stakes in Elsam A/S and I/S Avedøre 2. Construction begins of a pilot Carbon Capture and Storage plant in Schwarze Pumpe.

**2007** The Lillgrund wind farm, with 48 turbines, is commissioned and begins delivering electricity at the end of the year.

**2008** Vattenfall lays out its strategic direction during the autumn – Making electricity clean. This also summarises Vattenfall's climate vision – to be climate-neutral by 2050. In September the world's first pilot CCS plant using oxyfuel technology is inaugurated in Germany. During the autumn Vattenfall acquires several wind power companies in the UK: AMEC Wind Energy Ltd, Eclipse Energy UK Plc, and Thanet Offshore Wind Ltd, the UK's largest offshore wind farm ready for construction.

**2009** On 1 July Vattenfall acquires 49% of Dutch energy company N.V. Nuon Energy, with approximately 6,000 employees, and takes over operative control of the company. Consideration for the remaining 51% will be paid by Vattenfall in three tranches in the coming five years. Vattenfall begins collaborations with car makers (BMW and Volvo) on development of electric and plug-in hybrid cars.

**2010** In May Vattenfall sells 50Hertz Transmission GmbH, its high voltage transmission grid in Germany. In September Vattenfall announces a new strategic direction and a new, business-led Group organisational structure, which replaces the previous geographically based organisational structure. In September Vattenfall also inaugurates Thanet, the world's largest offshore wind farm, in the UK.